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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

	Application No.	Applicant(s)			
	10/611,651	O'HARA ET AL.			
Office Action Summary	Examiner	Art Unit			
	Sai-Ming Chan	2616			
The MAILING DATE of this communication appears on the cover sheet with the correspondence address Period for Reply					
A SHORTENED STATUTORY PERIOD FOR REPLY WHICHEVER IS LONGER, FROM THE MAILING DA - Extensions of time may be available under the provisions of 37 CFR 1.13 after SIX (6) MONTHS from the mailing date of this communication. - If NO period for reply is specified above, the maximum statutory period w. - Failure to reply within the set or extended period for reply will, by statute, Any reply received by the Office later than three months after the mailing earned patent term adjustment. See 37 CFR 1.704(b).	ATE OF THIS COMMUNICATION 36(a). In no event, however, may a reply be tim will apply and will expire SIX (6) MONTHS from to cause the application to become ABANDONE	. the mailing date of this communication. (35 U.S.C. § 133).			
Status	÷				
1)	action is non-final. nce except for formal matters, pro				
Disposition of Claims					
4) Claim(s) 1-34 is/are pending in the application. 4a) Of the above claim(s) 8,9,18 and 19 is/are versions. 5) Claim(s) is/are allowed. 6) Claim(s) 1-7,10-17 and 20-34 is/are rejected. 7) Claim(s) is/are objected to. 8) Claim(s) are subject to restriction and/or Application Papers	vithdrawn from consideration. r election requirement.				
 9) The specification is objected to by the Examiner. 10) The drawing(s) filed on is/are: a) accepted or b) objected to by the Examiner. Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a). Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d). 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152. 					
Priority under 35 U.S.C. § 119					
 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f). a) All b) Some * c) None of: 1. Certified copies of the priority documents have been received. 2. Certified copies of the priority documents have been received in Application No. 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)). * See the attached detailed Office action for a list of the certified copies not received. 					
Attachment(s) 1) ☒ Notice of References Cited (PTO-892) 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date 11/13/2007.	4) Interview Summary Paper No(s)/Mail Da 5) Notice of Informal Pa	te			

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DETAILED ACTION

Claim + USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 30 and 32-34 are rejected under 35 U.S.C. 102(b) as being unpatentable over Kostic et al. (U.S. Patent Publication # 20030139197).

Consider **claim 30**, Kostic et al., clearly disclose and show a wireless network environment comprising a plurality of wireless network access devices for wireless communication with wireless clients, a method enabling a directed association scheme, comprising

scanning (paragraph 22 (active scanning)), at a wireless client (paragraph 0022 (mobile station)), for wireless network access devices in a wireless network environment;

selecting (paragraph 24 (adopts the BSSID and channel sync)) at the wireless client (paragraph 0024 (mobile station)), a wireless network access devices identified in

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the scanning step;

transmitting, from the wireless client (paragraph 0024 (mobile station)), an association request (paragraph 24 (association request is issued))to the selected wireless network access devices;

receiving, at the wireless client (paragraph 0024 (mobile station)), an association response (paragraph 24 (association response)) from the selected wireless network access device, wherein the association response denies the association request (abstract (allowing association with other access points); paragraph 30, lines (some access points are excluded from mobile units, it will be forced to associate with other access points)) and identifies at least one allowable wireless network access devices; and

transmitting, from the wireless client (paragraph 0024 (mobile station)), an association request (paragraph 24 (issued association request to associate with selected access point)) to one of the at least one allowable wireless network access devices.

Consider **claim 32**, and **as applied to claim 30 above**, Kostic et al. clearly disclose and show a method further comprising storing (paragraph 32 (processor for storing access point ID)) the wireless network access devices detected in the scanning step.

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Consider claim 33, and as applied to claim 30 above, Kostic et al. clearly disclose and show a method wherein the wireless network access devices are access points (paragraph 24 (access point)).

Consider claim 34, and as applied to claim 30 above, Kortic et al. clearly disclose and show the protocol information (paragraphs 0024-0026 (access point id)).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* v. *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

- 1. Determining the scope and contents of the prior art.
- 2. Ascertaining the differences between the prior art and the claims at issue.
- 3. Resolving the level of ordinary skill in the pertinent art.
- 4. Considering objective evidence present in the application indicating

obviousness or nonobviousness.

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This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-5, 12, 14-15 and 25-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Whelan et al. (U.S. Patent Publication # 20040198220), in view of Kostic et al. (U.S. Patent Publication # 20030134642), and further in view of Douglas et al. (U.S. Patent Publication # 20050060319).

Consider **claims 1 and 25**, Whelan et al. clearly disclose and show an apparatus for use in a wireless network (paragraph 10 (wireless network)) environment and enabling a directed association (paragraph 10 (association control list)) of wireless clients to one of a plurality of wireless network access devices (paragraph 10 (plurality of BSSIDs)), comprising

a transmit/receive unit (paragraph 2, lines 8-12(access point)) for wireless communication (paragraph 2, lines 12-16(wireless LAN)) with at least one remote client

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element (paragraph 2, lines 8-12(mobile unit)),

a network interface (paragraph 4, lines 1-4 (access points)) for communication with devices over a wired computer network (paragraph 4, lines 1-4 (wired LAN)), wherein the apparatus is operative to:

receive an association request (fig. 2a (50 (initiate association), paragraph 120s)) from a remote client element;

compute a set of allowable wireless network access devices (fig. 1 (36 (MU association list))) with which the remote client element may associate;

transmit an association response (paragraph 13 (provide a response)) to the remote client element,

wherein the association response identifies at least one of the wireless network access devices (paragraph 17, lines 1-10 (access point wirelessly transmit an association control list)) in the computed set of allowable wireless network access devices; and

establish and maintain, in an access point mode (paragraph 17, lines 1-10(access point)), wireless connections with remote client elements (paragraph 17, lines 1-10(wireless devices)) to bridge wireless traffic between the remote client elements and the computer network (paragraph 17, lines 1-10(MU->AP->LAN->computers)).

However, Whelan et al. do not specifically disclose a list included in the association request.

In the same field of endeavor, Kostic et al. clearly shows disclose receiving a list of detected wireless network access devices from a wireless client (paragraph 0037, lines 1-9 (sends access point association info)).

Therefore it would have been obvious to a person of ordinary skill in the art at the time the invention was made to demonstrate a wireless network apparatus, as taught by Whelan et al., and incorporate a list in the association request, as taught by Kostic et al., in order to handle the association request efficiently.

However, Whelan et al., as modified by Kostic, do not specifically disclose computing common or alternate access devices.

In the same field of endeavor, Douglas et al. clearly shows disclose computing a set of access points common (fig. 5a (506), paragraph 0080 (search a list of access points that supports the feature vector (which could be a list of access devices))) to wireless client list (paragraph 0079 (feature vector specified in the association request)) allowable access devices (paragraph 0079 (appropriate list)) or alternate (fig. 5a (508), paragraph 0080 (roaming list)) wireless access devices.

Therefore it would have been obvious to a person of ordinary skill in the art at the time the invention was made to demonstrate a wireless network apparatus, as taught by Whelan et al., incorporate a list in the association request, as taught by Kostic et al., and compute allowable or alternate access elements, as taught by Douglas, so that the mobile unit can associate correctly with an access point.

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Consider claim 2, and as applied to claim 1 above, Whelan et al., as modified by Kostic and Douglas, clearly disclose and show an apparatus wherein the wireless network access devices are access points (paragraph 17, lines 1-10(access point)).

Consider **claim 3**, and **as applied to claim 1 above**, Whelan et al., as modified by Kostic and Douglas, clearly disclose and show an apparatus wherein the wireless network access devices are access elements in a wireless network system including hierarchical processing of protocol information (paragraph 4 (ESS (extended service set) protocol)).

Consider claims 4 and 26, and as applied to claims 1 and 25 above, respectively, Whelan et al., as modified by Kostic and Douglas, clearly disclose and show an apparatus wherein the at least one wireless network access device transmitted in the association response is identified by wireless MAC address (paragraph 6 (BSSID = MAC of access point)).

Consider claim 5 and 27, and as applied to claims 4 and 26 above, respectively, Whelan et al., as modified by Kostic and Douglas, clearly disclose and show an apparatus wherein the at least one wireless network access device is further

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identified by BSSID (paragraph 6 (BSSID = MAC of access point)).

Consider **claim 12**, Whelan et al. clearly disclose and show a wireless network system (paragraph 10 (wireless network)) enabling a directed association mechanism (paragraph 10 (association control list)), comprising

a plurality of access elements (paragraph 10 (plurality of BSSIDs)) for wireless communication with at least one remote client element (paragraph 2, lines 8-12(mobile unit)) and for communication with a central control element;

a central control element (fig.1(10 & 12),) for supervising at least one of said access elements,

wherein the central control element is operative to manage and control the wireless connections between the access elements and corresponding remote client elements; and

wherein the access elements are each operative to:

receive an association request (fig. 2a (50 (initiate association), paragraph 120s)) from a remote client element;

transmit the association request (paragraph 13(request form mobile device)) to a corresponding central control element;

receive an association response (fig. 2(26->20->12 & 10);paragraph 13)from the central control element; and

transmit the association response (paragraph 13 (provide a response)) to

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the remote client element;

wherein the central control element is operative to:

receive, via an access element, an association request (fig. 2(26->20->12 & 10); paragraph 13) from a remote client element;

compute a set of allowable access elements (fig. 1 (16 (association lists)), paragraph 44) with which the remote client element may associate;

transmit an association response (fig. 2(26->20->12 & 10); paragraph 13) to the remote client element via an access element, wherein the association response identifies at least one of the access elements (paragraph 17, lines 1-10 (access point wirelessly transmit an association control list)) in the computed set of allowable access elements.

However, Whelan et al. do not specifically disclose a list included in the association request.

In the same field of endeavor, Kostic et al. clearly shows disclose receiving a list of detected wireless network access devices from a wireless client (paragraph 0037, lines 1-9 (sends access point association info). If the association is denied, the wireless device can attempt another associate request with another wireless network access (paragraph 0040 (attempts to associate with another access point)).

Therefore it would have been obvious to a person of ordinary skill in the art at the time the invention was made to demonstrate a wireless network apparatus, as taught by Whelan et al., and incorporate a list in the association request, as taught by Kostic et al., in order to handle the association request efficiently.

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However, Whelan et al., as modified by Kostic, do not specifically disclose computing common or alternate access devices.

In the same field of endeavor, Douglas et al. clearly shows disclose computing a set of access points common (fig. 5a (506), paragraph 0080 (search a list of access point that supports the feature vector)) to wireless client list (paragraph 0079 (feature vector specified in the association request)) or alternate (fig. 5a (508), paragraph 0080 (roaming list)) wireless access devices.

Therefore it would have been obvious to a person of ordinary skill in the art at the time the invention was made to demonstrate a wireless network apparatus, as taught by Whelan et al., incorporate a list in the association request, as taught by Kostic et al., and compute allowable or alternate access elements, as taught bu Douglas, so that the mobile unit can associate correctly with an access point.

For claim 14, and as applied to claim 12 above, Whelan et al., as modified by Kostic and Douglas, clearly disclose and show the system, wherein that at least one access element transmitted in the system, wherein that at least one access element association response is identified by wireless MAC address (paragraph 6 (BSSID = MAC of access point)).

For claim 15, and as applied to claim 14 above, Whelan et al., as modified by Kostic and Douglas, clearly disclose and show the system, wherein that at least one

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access element is further identified by BSSID (paragraph 6 (BSSID = MAC of access point)).

Claims 6, 11 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Whelan et al. (U.S. Patent Publication # 20040198220), in view of (i) Kostic et al. (U.S. Patent Publication # 20030134642), and in view of Douglas et al. (U.S. Patent Publication # 20050060319), and further in view of (ii) Kostic et al. (U.S. Patent Publication # 20030139197).

Consider claims 6 and 28, and as applied to claims 4 and 27 above, respectively, Whelan et al. clearly disclose the apparatus as described. However, Whelan et al. do not specifically disclose the operating channel in the response.

Furthermore, (ii) Kostic et al. clearly disclose, in the association response, the current operating channel (paragraph 30 (frequency option information in capability information which is the same for association request and response)) association with the at least one wireless network access device.

Therefore it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate a wireless network apparatus, as taught by Whelan et al., and demonstrate the operating channel in the response, as taught by (b) Kostic et al., so that the mobile unit can associate correctly with an access point.

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Consider **claim 11**, and **as applied to claim 1 above**, Whelan et al. as modified by Kostic and Douglas, clearly disclose and show an apparatus as described.

However, Whelan et al., as modified by Kostic and Douglas, do not specifically disclose a probe request and response. In the same field of endeavor, (ii) Kostic et al. clearly disclose:

the remote client element (fig. 1 (MS (a,b,c...)), paragraph 0016) transmit probe requests (paragraph 22 (probe request)) to wireless network access devices, and wherein the apparatus is operative to receive from wireless network access devices in the wireless network system indications (paragraph 22 (probe response)) that the wireless network access devices detected the probe requests of the wireless client.

Therefore it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate a wireless network apparatus, as taught by Whelan et al., and identify the access point id, as taught by (ii) Kostic et al., so that the mobile unit can associate correctly with an access point.

Consider claims 16, and as applied to claim 14 above, Whelan et al. clearly disclose the apparatus as described. However, Whelan et al. do not specifically disclose the operating channel in the response.

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Furthermore, (ii) Kostic et al. clearly disclose, in the association response, the current operating channel (paragraph 30 (frequency option information in capability information which is the same for association request and response)) association with the at least one wireless network access device.

Therefore it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate a wireless network apparatus, as taught by Whelan et al., and demonstrate the operating channel in the response, as taught by (ii) Kostic et al., so that the mobile unit can associate correctly with an access point.

Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Whelan et al. (U.S. Patent Publication # 20040198220), in view of Kostic et al. (U.S. Patent Publication # 20030134642), and in view of Douglas et al. (U.S. Patent Publication # 20050060319), and further in view of Hawkins et al. (U.S. Patent # 7025209).

Consider claim 13, and as applied to claim 12 above, Whelan et al. clearly disclose and show a wireless network system enabling a directed association mechanism as described.

However, Whelan et al. do not specifically disclose the tunnel with access elements. Furthermore, Hawkins clearly disclose the tunnel (fig. 5(430 (tunneler)),

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column 17, lines 57-67, column 18, lines 1-26 (tunnel connects wireless client and proxy server)) with access elements.

Therefore it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate a wireless network apparatus, as taught by Whelan et al., and demonstrate the tunnel with access elements, as taught by Hawkins, so that the mobile unit can associate correctly with an access point.

Claims 7, 17 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Whelan et al. (U.S. Patent Publication # 20040198220), in view of Kostic et al. (U.S. Patent Publication # 20030134642), and in view of Douglas et al. (U.S. Patent Publication # 20050060319), and further in view of Islam et al. (U.S. Patent Publication # 20040103194).

Consider claims 7, 17 and 29, and as applied to claims 1, 12 and 25 above, respectively, Whelan et al. clearly disclose the apparatus as described.

However, Whelan et al. do not specifically disclose the using of a load balancing algorithm.

In addition, Islam et al. clearly disclose the use of load balancing in associating a mobile unit with an access point (paragraph 48 (load balancing algorithm)).

Therefore it would have been obvious to a person of ordinary skill in the art at the

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time the invention was made to incorporate a wireless network apparatus, as taught by Whelan et al., and demonstrate the use of load balancing, as taught by Islam et al., so that the mobile unit can associate correctly with an access point.

Claims 10, 20, 21 and 23-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Whelan et al. (U.S. Patent Publication # 20040198220), in view of (i) Kostic et al. (U.S. Patent Publication # 20030134642), and in view of Douglas et al. (U.S. Patent Publication # 20050060319), and further in view of Islam et al. (U.S. Patent Publication # 20040103194), and further in view of (ii) Kostic et al. (U.S. Patent Publication # 20030139197).

Consider claims 10 and 20, and as applied to claim 7 and 17 above, respectively, Whelan et al., as modified by (i) Kostic, Douglas and Islam et al., clearly disclose the apparatus as described.

However, Whelan et al., as modified by (i) Kostic, Douglas and Islam et al., do not specifically disclose exchange of load data. Furthermore, (ii) Kostic et al., clearly disclose and show an apparatus wherein the apparatus is operative to exchange load data with other apparatuses (paragraph 8 (handoffs)) in the wireless network system.

Therefore it would have been obvious to a person of ordinary skill in the art at the

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time the invention was made to incorporate a wireless network apparatus, as taught by Whelan et al., and demonstrate the load data exchange, as taught by (ii) Kostic et al., so that the mobile unit can associate correctly with an access point.

Consider claims 21 and 22, and as applied to claim 20 above, Whelan et al., as modified by (i) Kostic, Douglas and Islam et al., clearly disclose and show a wireless network system enabling a directed association mechanism as described.

However, Whelan et al., as modified by (i) Kostic, Douglas and Islam et al., do not specifically disclose the content of the load data. In addition, (ii) Kostic et al., clearly disclose the load data contains the number of remote client elements (paragraphs 7 & 8 (loading level information); paragraph 17 (number of associated stations)) and data throughput (paragraph 17 (traffic intensity)) to the access elements.

Therefore it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate a wireless network apparatus, as taught by Whelan et al., and identify the load data, as taught by (ii) Kostic, so that the mobile unit can associate correctly with an access point.

Consider claims 23, and as applied to claim 20 above, Whelan et al., as modified by (i) Kostic, Douglas and Islam et al., clearly disclose and show a wireless network system enabling a directed association mechanism as described.

However, Whelan et al., as modified by (i) Kostic, Douglas and Islam et al., do not specifically disclose the probe request by the access elements. In the same field of

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endeavor, (ii) Kostic et al. clearly disclose the sending of probe request by access elements (paragraph 22 (probe request)).

Therefore it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate a wireless network apparatus, as taught by Whelan et al., and identify the load data, as taught by (ii) Kostic, so that the mobile unit can associate correctly with an access point.

Consider claims 24, and as applied to claim 23 above, Whelan et al., as modified by (i) Kostic, Douglas and Islam et al., clearly disclose and show a wireless network system enabling a directed association mechanism as described.

However, Whelan et al., as modified by (i) Kostic, Douglas and Islam et al., do not specifically disclose the association response. In the same field of endeavor, (ii) Kostic et al. clearly disclose the comparison of the identified access elements detecting the probe requests of the wireless client to the set of allowable access elements, and wherein the association response includes at least one allowable access element that also detected probe requests of the wireless client (paragraph 24, paragraph 25, table 5 (3 Association ID)).

Therefore it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate a wireless network apparatus, as taught by Whelan et al., and identify the load data, as taught by (ii) Kostic, so that the mobile unit can associate correctly with an access point.

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Claim 31 is rejected under 35 U.S.C. 103(a) as being unpatentable over (i) Kostic et al. (U.S. Patent Publication # 20030139197), in view of (ii) Kostic et al. (U.S. Patent Publication # 20030134642).

Consider claim 31, and as applied to claim 30 above, (i) Kostic et al. clearly disclose and show the method as described.

However, (i) Kostic et al. do not specifically disclose list of access devices.

In the same field of endeavor, (ii) Kostic et al. clearly disclose the association request (paragraph 0037, lines 1-9 (association request)) includes a list of one or more wireless network access devices (paragraph 0037, lines 1-9 (sends access point association info)).

Therefore it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate a wireless network apparatus, as taught by (i) Kostic et al., and demonstrate the list of acees devices in the association request, as taught by (ii) Kostic, so that the mobile unit can associate correctly with an access point.

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Response to Amendment

Applicant's arguments filed on November 15, 2007, with respect to claims 1, 12, 25 and 30, on page 10 and through page 14 of the remarks, have been fully considered but they are moot in view of the new ground(s) of rejection necessitated by the new limitations added to claims 1, 11, 12, 25 and 30. See the above rejections of claims 1, 12, 25 and 30 for the relevant interpretation and citations found in Kosticand Douglas, disclosing the newly added limitations.

Conclusion

Any response to this Office Action should be faxed to (571) 273-8300 or mailed to:

Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

Hand-delivered responses should be brought to

Customer Service Window Randolph Building 401 Dulany Street Alexandria, VA 22314 Art Unit: 2616

Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Sai-Ming Chan whose telephone number is (571) 270-1769. The Examiner can normally be reached on Monday-Thursday from 6:30am to 5:00pm.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Seema Rao can be reached on (571) 272-3174. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free) or 571-272-4100.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist/customer service whose telephone number is (571) 272-2600.

Sai-Ming Chan

S.C./sc

January 23, 2008

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